

REMARKS

This paper is filed in response to the Office Action mailed 13th November 2009. Claims 1-6, 10-14, 16-18, and 20-24 were pending in the application. Of the above claims 13, 14, 16-18 and 20 are withdrawn from consideration. Claims 1, 10, 14, 16 and 21 have been amended. Therefore, claims 1-6, 10-12 and 21-24 are submitted for reconsideration.

Claim Amendments

Claims 1, 10, 14, 16 and 21 have been amended to specify the polymeric nature of the adhesive heat seal layer. Basis for this amendment is to be found on page 1, line 19 where adhesives are defined as being distinct from welding and brazing; page 8, line 22 to line 29, which refers to the plastic outer layers; page 14, line 1 to line 4 which refers to PVC/polycrylate based adhesive; page 14, line 10, which refers to glue which is understood to be distinct from welding or brazing. No matter is added by such amendment.

Rejection of Claims 1-6, 10, 11, 21, 23 and 24

Claims 1-6, 10, 11, 21, 23 and 24 were rejected under 35 U.S.C. § 103(a) as being unpatentable in view of Yasutake et al. in combination with Lamich.

In response to these rejections, claim 1 has been amended to explicitly require that the heat seal layer comprises a polymer adhesive.

The Examiner has indicated that Yasutake discloses a heat exchanger construction having plates formed of a clad brazing sheet that permits furnace brazing.

Lamich also describes a heat exchanger construction in which brazing is used to bond various sections together (see column 2, line 17 to line 22). A combination of the teachings of Lamich with those of Yasutake would thus still fail to meet all of the integers of claim 1, in particular the presence of a polymer adhesive heat seal layer.

The Examiner has however indicated that polymer based adhesives are well known in the art of heat exchanger manufacturing. Even if this were the case (no specific citations have been presented), it must be noted that a heat-seal layer is a very specific form of polymer based adhesive.

Applicant also believes that use of heat-seal adhesives has been limited to constructional purposes distant from areas required to perform a heat transfer function. According to the present invention as defined in claim 1, an adhesive connection is formed

between a laminate and a plurality of fins. The fins serve to increase the effective surface area of the laminate and are connected in heat conducting relationship therewith. Such connections where heat conduction is required have in the past been performed using welding, soldering or brazing techniques. Claim 1 also requires a further connection between the laminate and itself or a similar laminate in order to form a flow channel. This connection is also provided using a heat seal adhesive. It is respectfully submitted that nothing in the art of record teaches or suggests the use of adhesives to perform both a sealing function and to attach heat transfer elements in heat conducting relation to a heat exchange laminate.

As a still further benefit, it is noted that the use of a polymer adhesive layer also fulfills an anti-corrosive function as described at page 6, line 33 of the original specification.

For the above reasons, the Examiner is respectfully requested to reconsider the rejection of claim 1.

Claims 2-6, 10-13 and 24 depend from claim 1 and are thus patentable on that basis.

Claim 21 is novel and inventive over the art of record for the same reasons as given above in relation to claim 1.

Claims 22, and 23 depend from claim 21 and are thus patentable on that basis.

Finality of action

The Examiner has taken the position that within the limitations imposed by MPEP 2111, "adhesive" may be interpreted broadly to include brazing and soldering. The MPEP however requires interpretation to be "reasonable" within the context of Applicant's specification. In the present case, the Applicant has clearly drawn a distinction between the terms adhesive/glue, brazing and welding (see e.g. page 1, line 19, page 13, lines 29, 30). Within the sub-group of adhesives, the Applicant has distinguished heat-seal adhesives as forming the basis for the present invention.

In choosing to ignore the underlying teaching of the application and the consistent arguments presented by Applicant's representative, it is respectfully noted that the Examiner may have strayed from a "reasonable" interpretation. The very fact that reference is given on page 4 of the instant action to Applicant's true intentions suggests that the Examiner has appreciated this distinction. Nevertheless, by making the action final rather than present arguments and new citations relating to what Applicant has presented as the invention, the Applicant has been deprived of an opportunity to respond to this allegation of obviousness prior to issuance of a final rejection.

The Examiner is respectfully requested to reconsider and withdraw the finality of the instant action.

Rejoinder of claims 14, 16-18 and 20

Claim 14 also explicitly relies upon the same features as claim 1, in particular, the sealing under heat and pressure of a heat-sealable polymer adhesive layer to join fins to a laminate. For this reason, rejoinder is believed to be appropriate.

In view of the above, Applicant respectfully requests entry and allowance of claims 1-6, 10-14, 16-18, and 20-24 by the Examiner.

Information Disclosure Statement

An IDS was filed on 2nd November 2009. The Examiner is respectfully requested to initial and return the there enclosed form PTO/SB/08A indicating that the documents have been considered.

Extension of Time

Any extension of time that may be deemed necessary to further the prosecution of this application is hereby requested.

Authorization to Charge Fees

The Commissioner is authorized to charge any additional fees which may be required, or credit any overpayment, to Deposit Account No. 08-3038, referencing the docket number shown above.

Authorization to Communicate via email

Pursuant to MPEP 502.03, authorization is hereby given to the USPTO to communicate with Applicant's representative concerning any subject matter of this application by electronic mail. I understand that a copy of these communications will be made of record in the application file. Applicant's representative, David P. Owen, can be reached at email address owend@howrey.com.

The Examiner may also contact the undersigned by telephone at the number given below in order to resolve any questions (note, this telephone number is an Amsterdam phone number, Amsterdam time is 6 hours ahead of US east coast time).

Respectfully submitted,

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